



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,636	04/25/2006	Shigeki Inatomi	80040(302720)	1503
21874 7590 05/11/2009 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205				
EXAMINER				
HEINCE, LIAM J				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
05/11/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,636

Applicant(s)

INATOMI ET AL.

Examiner

Liam J. Heincer

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/24/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 17, 2009 has been entered.

Claim Rejections - 35 USC § 103

Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inatomi et al. (WO 03/04267). Note: US Patent 7,241,833 is being used as an English language equivalent of WO 03/04267 and all citations are directed towards the US Document.

Considering Claims 1 and 6: Inatomi et al. teaches a process for the production of a phenolic novolak (Abstract) comprising the step of conducting a heterogeneous reaction of a phenol and an aldehyde in the presence of at least 25 parts by mass phosphoric acid per 100 parts mass of phenol (7:23-28) and methyl isobutyl ketone/an oxygen containing organic co-solvent (Example 1). Inatomi et al. also teaches the heterogeneous reaction as being between two liquids in a whitish/cloudy state caused by the mixing of an organic phase having the phenol as the main ingredient and a water phase having the phosphoric acid and aldehyde (5:1-21).

Inatomi et al. does not teach adding the cosolvent to the water phase. However, it has been found that any order of adding ingredients has been found to be prima facie obvious absent a showing of new or unexpected results. As there has been no showing of the criticality of the claimed order of adding ingredients, it would have been obvious to have added the cosolvent in the water phase rather than to the heterogeneous system. See MPEP § 2144.04.

Inatomi et al. does not teach the claimed amount of cosolvent. However, differences in concentration are generally not sufficient to provide patentability. See MPEP § 2144.05. Since Inatomi et al. shows that the amount of ketone will affect the degree of the condensates solubility in the aqueous phase, the amount of cosolvent is a result effective variable. Therefore it would have been obvious to a person having ordinary skill in the art at the time of invention to have optimized the amount of cosolvent in Inatomi et al. through routine optimization, and the

motivation to do so would have been, as Inatomi et al. suggests, to dissolve the condensates in the organic phase to prevent further condensation, thus controlling the degree of dispersion in the final product (5:1-21).

Considering Claim 2: Inatomi et al. teaches the amount of phosphoric acid as being from 50 to 100 parts per 100 parts phenol (4:25-28).

Considering Claim 7: Inatomi et al. teaches the amount of aldehydes as being 0.40 to 0.93 moles of aldehyde per mole of phenol (4:5-9).

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inatomi et al. (WO 03/04267) as applied to claim 1 above, and further in view of Helbing (WO 99/60043). Note: US Patent 7,241,833 is being used as an English language equivalent of WO 03/04267 and all citations are directed towards the US Document.

Considering Claim 8: Inatomi et al. teaches the method of claim 1 as shown above. Inatomi et al. does not teach adding a surface active agent to the reaction mixture. However, Helbing teaches adding a surfactant to a reaction mixture comprising phenol and an aldehyde (7:19-25). Inatomi et al. and Helbing et al. are analogous art as they are concerned with a similar technical difficulty, namely producing condensation products of phenol and an aldehyde in solution. It would have been obvious to a person having ordinary skill in the art at the time of invention to have added the surfactant of Helbing to the reaction mixture of Inatomi et al., and the motivation to do so would have been, as Helbing suggests, to prevent agglomeration of the reaction products (7:19-25).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inatomi et al. (WO 03/04267) as applied to claim 1 above, and further in view of Saito et al. (US 2002/0091224). Note: US Patent 7,241,833 is being used as an English language equivalent of WO 03/04267 and all citations are directed towards the US Document.

Considering Claim 9: Inatomi et al. teaches the method of claim 1 as shown above.

Inatomi et al. does not teach the reaction being done at pressure. However, Saito et al. teaches performing novolak condensation reaction at a pressure of 0.01 to 0.15 MPa (¶0018). Inatomi et al. and Saito et al. are analogous art as they are concerned with the same field of

endeavor, namely the production of novolak resins. It would have been obvious to a person having ordinary skill in the art at the time of invention to have preformed the reaction of Inatomi et al. a the pressure of Saito et al., and the motivation to do so would have been, as Saito et al. suggests, to provide a resin product at a high yield (§0010).

Response to Arguments

Applicant's arguments filed February 24, 2009 have been fully considered but they are not persuasive, because:

Applicants reliance on the foreign priority document to establish priority is not sufficient to overcome the rejection as the priority document does not provide proper basis for all the claimed limitations. Specifically, the foreign priority document provides support for the reaction co-solvent being present in an amount of 5 to 200 parts by mass (§0022), but not the narrower claimed range of 5 to 100 parts by mass. The example used in the original specification to provide basis for the narrow range (Table 3) is not performed in the foreign priority document. However, it has been determined that the claims would be allowable should the broader range of 5 to 200 parts by mass be added to the instant claim 1, thus removing the WO 03/04267 document as art.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/

Supervisory Patent Examiner, Art Unit 1796

LJH

May 6, 2009